

## Disabling CFT Inputs to L1MUON

A problem with the CFT inputs might present itself in the following ways:

- And/Or terms 192 and 193 (the “beginning of turn” triggers) have values other than 47712 Hz.
- The central L1MUON crate (0x16) goes “Out of Synch” and doesn’t recover after the DAQ shifter issues an SCL init.
- The L3 input rate drops suddenly and stays low.

If the shifter sees a problem, he/she should:

- Check with the CFT shifter to see if there is a CFT-related problem. If so, let them attempt to recover and, after the DAQ shifter issues an SCL init, check the above conditions again.
- If the problem persists, **request that the run be paused** and then disable the CFT inputs using the GUI (an illustrated guide is available in the L1MUON Documentation binder):
  1. `mutest@d00146~> setup d0online`
  2. `mutest@d00146~>/projects/l1muo/vme_gui/l1muon_inputs.py&`  
(A GUI window will appear.)
  3. Click on the “CFT masks” tab (upper right). (You will be taken to the notebook page for CFT Inputs.)
  4. Click on “kill all cft inputs” button.
  5. A new window will appear telling you to restore the MTCC crate. Click on “ok I’ll do it” button.
  6. Click on “Crate Controls” tab (upper left) to return to the main page.
  7. In the row labeled MTCC, click on the “restore” button.
  8. If status button turns green, click on “exit no write” button.
  9. Ask the DAQ shifter to issue an SCL init. And/Or terms 192 and 193 on the DAQ Monitor should both be 47712 Hz. If so, you're done!
- Make a note in the logbook and send email to L1MUON experts ([d0\\_l1mu@fnal.gov](mailto:d0_l1mu@fnal.gov)).

## Disabling CFT Inputs to L1MUON: Step by Step

1. `mutest@d0o146~> setup d0online`
2. `mutest@d0o146~>/projects/l1muo/vme_gui/l1muon_inputs.py&`

crate id	crate commands			crate status	
MCNNA	cold start	restore	check	offline	not touched
MCNHB	cold start	restore	check	offline	not touched
MCNSA	cold start	restore	check	offline	not touched
MCNSB	cold start	restore	check	offline	not touched
MCNC	cold start	restore	check	offline	not touched
MTCC	cold start	restore	check	offline	not touched
MTCN	cold start	restore	check	offline	not touched
MTCS	cold start	restore	check	offline	not touched
MTM	cold start	restore	check	offline	not touched

cold start all crates

command status

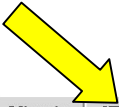
reset masks      write trigger mask files      exit no write

*(A GUI window will appear)*

If you have any problems, call the Level 1 Muon pager

## Disabling CFT Inputs to L1MUON: Step by Step

3. Click on the “CFT masks” tab (upper right)



The screenshot shows the 'L1 Muon Crate Panel' interface. At the top, there is a navigation bar with five tabs: 'Crate controls', 'PDT masks', 'MDT masks', 'SCI masks', and 'CFT masks'. A yellow arrow points to the 'CFT masks' tab. Below the tabs, the main panel is titled 'L1 Muon Crate Panel'. It contains a table with columns for 'crate id', 'crate commands', and 'crate status'. The table lists nine crates: MCNNA, MCNNB, MCNSA, MCNSB, MCNC, MTCC, MTCN, MTCS, and MTM. Each crate has three buttons: 'cold start', 'restore', and 'check'. The 'crate status' column shows 'offline' for all crates, and the 'not touched' status is indicated. Below the table is a button labeled 'cold start all crates'. At the bottom of the panel, there is a 'command status' section. At the very bottom of the interface, there are three buttons: 'reset masks', 'write trigger mask files', and 'exit no write'.

crate id	crate commands			crate status	
MCNNA	cold start	restore	check	offline	not touched
MCNNB	cold start	restore	check	offline	not touched
MCNSA	cold start	restore	check	offline	not touched
MCNSB	cold start	restore	check	offline	not touched
MCNC	cold start	restore	check	offline	not touched
MTCC	cold start	restore	check	offline	not touched
MTCN	cold start	restore	check	offline	not touched
MTCS	cold start	restore	check	offline	not touched
MTM	cold start	restore	check	offline	not touched

cold start all crates

command status

reset masks      write trigger mask files      exit no write

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## Disabling CFT Inputs to L1MUON: Step by Step

4. Click on “kill all cft inputs” button

The screenshot shows a web-based interface for configuring CFT (Calorimeter Front Trigger) inputs. At the top, there are five tabs: "Crate controls", "PDT masks", "MDT masks", "SCI masks", and "CFT masks". The "CFT masks" tab is currently selected. Below the tabs, the title "CFT test config" is centered. The main area contains a grid of checkboxes organized by octant. Each octant (0 through 7) has a row of 10 checkboxes, numbered from 0 to 9. All checkboxes are currently unchecked. Below the grid, there is a button labeled "kill all cft inputs". A large yellow arrow points to this button. At the bottom of the interface, there are three buttons: "reset masks", "write trigger mask files", and "exit no write".

Octant	0	1	2	3	4	5	6	7	8	9
octant 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

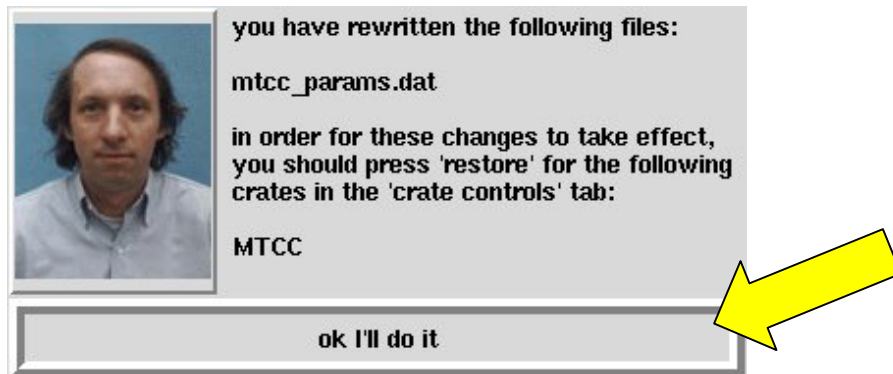
kill all cft inputs

reset masks      write trigger mask files      exit no write

If you have any problems, call the Level 1 Muon pager

## **Disabling CFT Inputs to L1MUON: Step by Step**

5. A new window will appear telling you to restore the MTCC crate. Click on “ok I’ll do it” button



## Disabling CFT Inputs to L1MUON: Step by Step

6. Click on “Crate Controls” notebook tab (upper left)



The screenshot shows a web-based interface for controlling CFT inputs. At the top, there are five tabs: 'Crate controls', 'PDT masks', 'MDT masks', 'SCI masks', and 'CFT masks'. A yellow arrow points to the 'Crate controls' tab. Below the tabs, the main area is titled 'CFT test config'. It contains a grid of checkboxes for each of the 8 octants (0 to 7). Each octant has 10 checkboxes, numbered 0 to 9. Below the grid is a button labeled 'kill all cft inputs'. At the bottom of the interface are three buttons: 'reset masks', 'write trigger mask files', and 'exit no write'.

Octant	0	1	2	3	4	5	6	7	8	9
octant 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
octant 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

kill all cft inputs

reset masks      write trigger mask files      exit no write

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## Disabling CFT Inputs to L1MUON: Step by Step

7. In the row labeled MTCC, click on the “restore” button

Crate controls	PDT masks	MDT masks	SCI masks	CFT masks	
<b>L1 Muon Crate Panel</b>					
	crate id	crate commands		crate status	
	MCNNA	cold start	restore	check	offline not touched
	MCNNB	cold start	restore	check	offline not touched
	MCNSA	cold start	restore	check	offline not touched
	MCNSB	cold start	restore	check	offline not touched
	MCNC	cold start	restore	check	offline not touched
	MTCC	cold start	restore	check	offline not touched
	MTCN	cold start	restore	check	offline not touched
	MTCS	cold start	restore	check	offline not touched
	MTM	cold start	restore	check	offline not touched
<div>cold start all crates</div>					
command status					
reset masks		write trigger mask files		exit no write	

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## Disabling CFT Inputs to L1MUON: Step by Step

8. If status button turns green, click on “exit no write” button.

Crate controlsPDT masksMDT masksSCI masksCFT masks

L1 Muon Crate Panel

crate id	crate commands			crate status	
MCNNA	cold start	restore	check	offline	not touched
MCNNB	cold start	restore	check	offline	not touched
MCNSA	cold start	restore	check	offline	not touched
MCNSB	cold start	restore	check	offline	not touched
MCNC	cold start	restore	check	offline	not touched
MTCC	cold start	restore	check	offline	restore complete
MTCH	cold start	restore	check	offline	not touched
MTCS	cold start	restore	check	offline	not touched
MTM	cold start	restore	check	offline	not touched

cold start all crates

changed dir on MTCC

reset masks

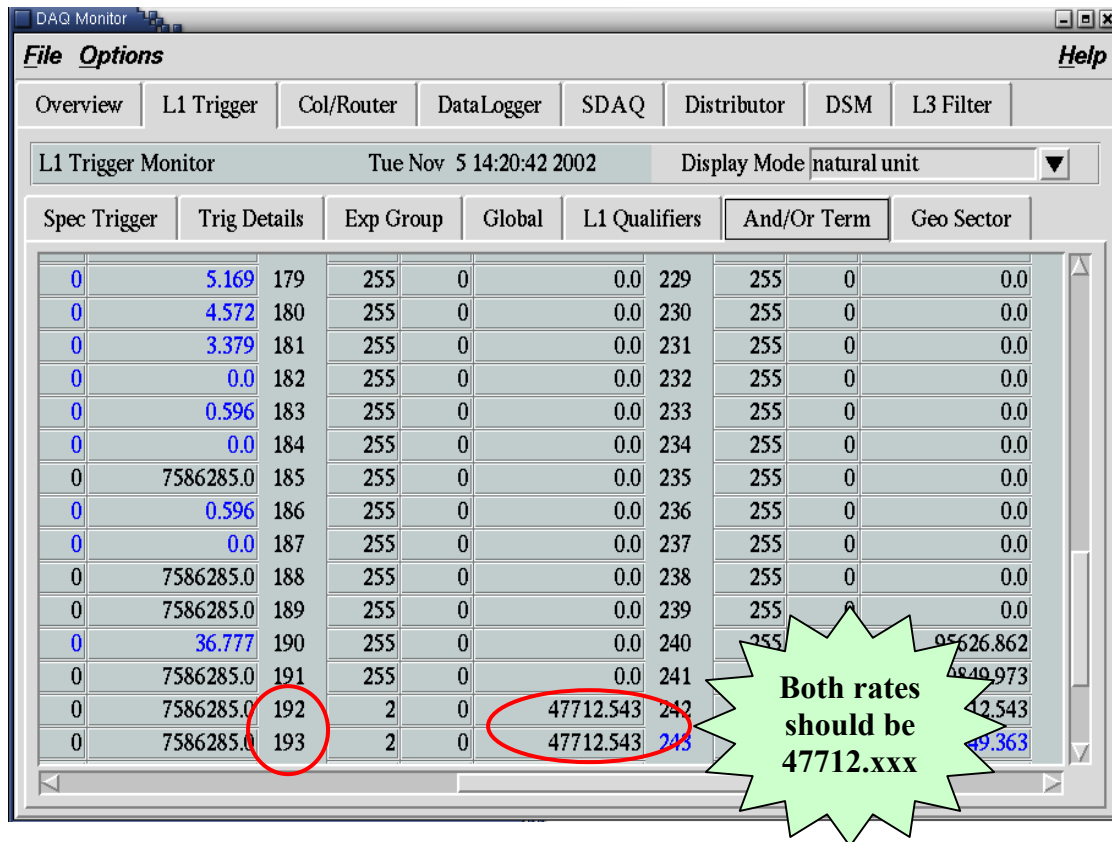
write trigger mask files

exit no write

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## Disabling CFT Inputs to L1MUON: Step by Step

9. Ask the DAQ shifter to issue an sclinit. And/Or terms 192 and 193 on the DAQ Monitor should both be 47712 Hz. If so, you're done!



DAQ Monitor

File Options Help

Overview L1 Trigger Col/Router DataLogger SDAQ Distributor DSM L3 Filter

L1 Trigger Monitor Tue Nov 5 14:20:42 2002 Display Mode natural unit

Spec Trigger	Trig Details	Exp Group	Global	L1 Qualifiers	And/Or Term	Geo Sector
0	5.169	179	255	0	0.0	229
0	4.572	180	255	0	0.0	230
0	3.379	181	255	0	0.0	231
0	0.0	182	255	0	0.0	232
0	0.596	183	255	0	0.0	233
0	0.0	184	255	0	0.0	234
0	7586285.0	185	255	0	0.0	235
0	0.596	186	255	0	0.0	236
0	0.0	187	255	0	0.0	237
0	7586285.0	188	255	0	0.0	238
0	7586285.0	189	255	0	0.0	239
0	36.777	190	255	0	0.0	240
0	7586285.0	191	255	0	0.0	241
0	7586285.0	192	2	0	47712.543	242
0	7586285.0	193	2	0	47712.543	243

Both rates should be 47712.xxx

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